Chapter 296-843 WAC

HAZARDOUS WASTE OPERATIONS

NEW SECTION

WAC 296-843-100 Scope. This chapter applies if you have any of the following:

✎ Employees working in operations involving hazardous waste at a treatment, storage, and disposal (TSD) facility required to have a permit or interim status AND regulated by any of the following:

– 40 CFR Parts 264 and 265 under the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. 6901 et seq.;

– Agencies implementing RCRA through agreements with the United States Environmental Protection Agency (U.S.E.P.A.);

– Chapter 173-303 WAC, Dangerous waste regulations;

OR

✎ Employees conducting initial investigations of government-identified sites before determining whether hazardous substances are present;

OR

✎ Employees working at a hazardous waste site to make the site safer for people or the environment. Sites include, but are not limited to:

– The Environmental Protection Agency's (EPA) National Priority Site List (NPL); see http://www.epa.gov/superfund/sites/npl/wa.htm;

– Sites recommended for inclusion on the EPA NPL;

– State priority site lists, for example those listed under chapter 173-340 WAC, Model Toxics Control Act (MTCA); see http://www.ecy.wa.gov/programs/tcp/cscs/CSCSpage.HTM;

– Unlisted sites recognized by a federal, state or local government as an uncontrolled hazardous waste site. Examples of such sites include:

✂ Those that do not meet clean-up goals established by the MTCA and that pose a threat or potential threat to human health or the environment;

✂ Clandestine drug lab sites designated for cleanup;

✂ Sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq.) or

chapter 70.105 RCW, Hazardous waste management;

– Postemergency response cleanup at the site of a hazardous substance release regulated by chapter 296-824 WAC, Emergency response.

IMPORTANT:

This chapter applies to hazardous waste sites until cleanup at the site is determined to be complete by the governing regulatory agency.

Place illustration here.

Other rules that may apply to hazardous waste operations:
You will find safety and health requirements (for example,

personal protective equipment) are addressed in other rules and also in this chapter. If you find a conflict in requirements, you need to meet the more protective requirement. Contact your local L&I office if you need assistance in making this determination.

Examples of other rules that may apply:

✎ Chapter 296-800 WAC, Safety and health core rules:

– WAC 296-800-140, Accident prevention program;

– WAC 296-800-210, Lighting;

– WAC 296-800-230, Drinking water, bathrooms, washing facilities and waste disposal.

✎ Chapter 296-24 WAC, Safety standards for general safety.

✎ Chapter 296-833 WAC, Temporary housing for workers.

✎ Chapter 296-62 WAC, General occupational health.

✎ Chapter 296-155 WAC, Safety standards for construction work.

✎ Chapter 296-824 WAC, Emergency response.

✎ Chapter 296-841 WAC, Respiratory hazards.

✎ Chapter 296-842 WAC, Respirators.

NEW SECTION

WAC 296-843-110 Evaluations and inspections.

Your responsibility:

To conduct evaluations before entering the site and periodically throughout the hazardous waste operations.

You must:

Complete a preliminary site evaluation before allowing employees to enter the site

WAC 296-843-11005.

Conduct ongoing evaluations of safety and health hazards

WAC 296-843-11010.

NEW SECTION

WAC 296-843-11005 Complete a preliminary site evaluation before allowing employees to enter the site.

You must:

✎ Complete a preliminary site evaluation by doing all the following:

Collect or develop the following information to the extent available:	✎ The site location and approximate size ✎ A description of the response activity and the job tasks to be performed ✎ The time needed to cover all planned activities ✎ The site's topography and all ways to access the site ✎ The current status and capabilities of any emergency response team assisting during an emergency ✎ The safety and health hazards expected at the site ✎ The hazardous substances and health hazards at the site, including their chemical and physical properties ✎ All hazardous substance dispersion pathways ✎ An emergency response plan
Have a qualified person evaluate the preliminary site information to identify:	✎ Potential site hazards and risks ✎ The most appropriate methods to protect employees ✎ Conditions that have the potential to cause death or serious harm, including potential inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH) – Examples include: ✂ Confined space entry ✂ Potentially explosive or flammable environments ✂ Visible vapor clouds ✂ Areas where plants or animals have died ✎ Risks related to specific on-site hazardous substances and health hazards – Examples include: ✂ Exposures exceeding the permissible exposure limits (PELs) or published exposure levels ✂ IDLH concentrations ✂ Potential skin absorption and irritation sources ✂ Potential eye irritation sources ✂ Explosion sensitivity and flammability ranges ✂ Oxygen deficient atmospheres
Have a qualified person prepare an initial site characterization and analysis for the site to:	✎ Identify known and suspected health and safety hazards for the site

	✎ Aid in selecting control methods to protect employees from site hazards ✎ Brief employees on site conditions before any work starts ✎ Initiate the site-specific health and safety plan (HASP)

Note: Characterization and analysis of site hazards is an ongoing process for work on the hazardous waste site.

NEW SECTION

WAC 296-843-11010 Conduct ongoing evaluations of safety and health hazards.

You must:

(1) Have a qualified person complete further evaluation of health and safety hazards at the site immediately after initial entry to:

✎ Identify site hazards in more detail.

✎ Help select appropriate:

– Control methods to protect employees from site hazards.

– Personal protective equipment (PPE) for site operations.

Note: For more information, see WAC 296-843-170, Hazard controls, and WAC 296-843-190, Personal protective equipment.

You must:

(2) Make sure your site safety and health supervisor or another qualified person performs periodic inspections to:

✎ Determine if the site-specific HASP is effective.

✎ Correct any deficiencies.

NEW SECTION

WAC 296-843-120 Health and safety plan (HASP).

Your responsibility:

To establish a written health and safety plan (HASP).

You must:

Develop and maintain a written site-specific health and safety plan (HASP)

WAC 296-843-12005.

NEW SECTION

WAC 296-843-12005 Develop and maintain a written site-specific health and safety plan (HASP).

Reference: If your overall program required under WAC 296-800-140, Accident prevention program (APP), meets requirements of this chapter, you do not need to duplicate those portions of your APP in the site-specific health and safety plan (HASP).

You must:

✎ Develop a written HASP for each hazardous waste site, **BEFORE** beginning hazardous waste operations, that includes at least the following:

Hazard analysis:

– Identification and evaluation of on-site safety and health hazards.

– A safety and health risk (hazard) analysis for each site task and operation that is identified in the comprehensive work plan.

Organization chart:

– An organizational structure that reflects current site operations, including the following:

✂ Establish and identify the chain of command.

✂ Identify the site safety and health supervisor and other personnel responsible for employee safety and health.

✂ Specify the overall responsibilities of supervisors and employees.

✂ Include the name and title of the person with responsibility and authority to direct all hazardous waste operations.

✂ Include a site safety and health supervisor responsible for developing and implementing the HASP and verifying compliance.

✂ Identify the functions and responsibilities of all personnel needed for hazardous waste operations and emergency response.

✂ Identify site specific lines of authority, responsibility, and communication.

Comprehensive work plan:

– A written comprehensive work plan of tasks, objectives, logistics, and resources for site operations, including the following:

✂ Addresses anticipated clean-up activities and normal operating procedures unless that information is already available in another document.

✂ Defines work tasks and objectives.

✂ Describes how the work tasks and objectives will be

accomplished.

✂ Establishes the personnel requirements to implement the work plan.

✂ Provides for implementation of training, briefings, and information as required by WAC 296-843-200.

Site control plan:

– An up-to-date site control plan before clean-up operations begin to minimize employee exposure to hazardous substances and including the following (unless it's available in another document):

✂ A site map.

✂ Establish site work zones.

✂ How the "buddy system" is used.

✂ The site communications plan, including how employees are alerted during emergencies.

✂ The site's standard operating procedures (SOPs) or safe work practices.

✂ Identification of the nearest medical assistance.

Personal protective equipment:

– A PPE plan that addresses all of the following:

✂ Site hazards and activities.

✂ Methods to evaluate the effectiveness of the PPE plan.

✂ Criteria for selecting and fitting PPE, including work duration, use limitations of particular PPE, and medical considerations such as temperature extremes and heat stress.

✂ Training on PPE use.

✂ Procedures for putting on and taking off PPE.

✂ PPE inspection procedures prior to, during, and after use.

✂ Decontamination and disposal of PPE.

✂ Maintenance and storage of PPE.

Additional elements:

– A sampling and monitoring plan (see WAC 296-843-130 that includes sampling of drums and containers).

– Site control measures (see WAC 296-843-140).

– Decontamination procedures (see WAC 296-843-150).

– Spill containment plans (see WAC 296-843-180, Drum and container handling).

– Standard operating procedures for sampling, managing, and handling drums and containers (see WAC 296-843-180).

– Entry procedures for tanks or vaults (see WAC 296-62-141, Confined spaces).

– A training, briefings, and information plan (see WAC 296-843-200).

– A medical surveillance plan (see WAC 296-843-210), that includes site-specific medical surveillance requirements.

– Sanitation (see WAC 296-155-140).

– Lighting (see WAC 296-800-210).

– Excavations (see chapter 296-155 WAC, Part N, Excavation, trenching and shoring).

– Any relationship or interaction between other programs and the site-specific program.

Note: The emergency response plan required by WAC 296-843-160, Emergency response for hazardous waste sites, is also included as a separate section in the HASP.

You must:

✎ Keep a copy of your HASP on site.

Reference: For more information, see WAC 296-843-220, Recordkeeping and information access.

NEW SECTION

WAC 296-843-130 Sampling and monitoring.

Your responsibility:

To conduct monitoring for health and safety hazards to protect employees.

You must:

Conduct monitoring for health and safety hazards during initial site entry

WAC 296-843-13005.

Evaluate employee exposure to hazardous substances during clean-up operations

WAC 296-843-13010.

NEW SECTION

WAC 296-843-13005 Conduct monitoring for health and safety hazards during initial site entry.

You must:

✎ Make visual observations of the site to detect signs of actual or potential immediately dangerous to life or health (IDLH) or other dangerous conditions.

✎ Conduct representative air monitoring with direct reading test equipment, when the preliminary site evaluation does not eliminate the potential for ionizing radiation or IDLH conditions.

✎ Assess the following:

– Potential IDLH conditions.

– Exposure over radioactive material dose limits.

– Potential exposure over permissible exposure limits (PELs) or other published exposure levels.

– Other dangerous conditions, such as the presence of

flammable or oxygen-deficient atmospheres.

Reference: See WAC 296-62-09004, Ionizing radiation, for additional information about radioactive material dose limits.

NEW SECTION

WAC 296-843-13010 Evaluate employee exposure to hazardous substances during clean-up operations.

IMPORTANT:

The clean-up operation begins when soil, surface water, or containers are moved or disturbed.

You must:

✎ Identify the type of personnel monitoring and environmental sampling you plan to use, including instrumentation.

✎ Include requirements for maintaining and calibrating the monitoring and sampling instruments used.

✎ Monitor whenever employees may be exposed to concentrations exceeding PELs or other published exposure levels.

✎ Evaluate employees who are likely to have the highest exposure:

– Monitor all employees who are likely to have the highest exposure to hazardous substances or health hazards above the PEL or published exposure limit.

– Use personal sampling frequently enough to characterize the exposures of these employees.

✂ When results indicate exposure is over the PEL or other published exposure level, identify all employees likely to be above the PEL or published exposure limit.

Note: You may use a representative sampling approach by documenting that the employees and chemicals chosen for monitoring are representative of both:

✎ Employee exposure to hazardous substances;

AND

✎ Employees not sampled.

You must:

✎ Conduct monitoring when the possibility of one of the following exists:

– An atmosphere that is immediately dangerous to life or health (IDLH);

OR

– A flammable atmosphere;

OR

– Employee exposures exceeding PELs or other published exposure levels.

Examples of situations where these possibilities may exist:

✂ Work begins on a different portion of the site.

- Contaminants other than those previously monitored are being handled.
- A different type of site operation starts, such as moving from drum opening to exploratory well drilling.
- Handling leaking drums or containers.
- Working in areas with obvious liquid contamination such as a spill or lagoon.
- Time has passed and employee exposure levels may have significantly increased.

NEW SECTION

WAC 296-843-140 Site control.

Your responsibility:

To establish a plan to control access to the site.

You must:

Establish a site control plan WAC 296-843-14005.

NEW SECTION

WAC 296-843-14005 Establish site control.

You must:

- Maintain site work zones and site control as required by Table 1, Site Work Zone Requirements.
- Control access to the exclusion and contamination reduction zones.
- Make sure people wear personal protective equipment (PPE) appropriate to their work zone.

Table 1
Site Work Zone Requirements

For this type of work zone:	You must:
Exclusion zone	- Establish entry and exit checkpoints on the zone's boundary - Regulate the flow of people and equipment into and out of the zone - Make sure exits go through a contamination reduction corridor

Contamination reduction zone with a contamination reduction corridor	✎ Enter through a control point from the clean zone ✎ Provide a transition or buffer between the exclusion zone and the clean zone ✎ Perform all decontamination procedures ✎ Establish separate decontamination routes for people and equipment, if practical ✎ Remove all PPE worn in the contamination reduction or exclusion zones before entering the clean zone
Clean zone or support zone	Have no exposure to hazardous substances or health hazards

Note: See Illustration 2 for an example of site work zones.

Place illustration here.

NEW SECTION

WAC 296-843-150 Worker and equipment decontamination.

Your responsibility:

To make sure the necessary facilities and equipment for effective decontamination are available and used.

You must:

Establish and implement decontamination procedures before any worker or equipment enters a contaminated area

WAC 296-843-15005.

Provide showers and changing rooms

WAC 296-843-15010.

Provide washing facilities

WAC 296-843-15015.

NEW SECTION

WAC 296-843-15005 Establish and implement decontamination procedures before any worker or equipment enters a contaminated area.

You must:

✎ Establish, implement, and communicate decontamination procedures to all workers, to include the following:

– Standard operating procedures to minimize worker contact with:

✂ Hazardous substances.

✂ Contaminated equipment.

– Decontaminating all:

✂ Workers leaving a contaminated area.

✂ Equipment leaving a contaminated area.

– Decontaminating, cleaning, laundering, repairing, or replacing protective clothing or equipment (PPE) as needed to maintain effectiveness.

– Immediate removal of clothing, such as cotton coveralls, wet with hazardous substances and use the nearest shower.

✂ Decontaminate or dispose of clothing before removal from the work zone.

– Have your procedures periodically monitored for effectiveness by the site safety and health supervisor.

– Correct your procedures when found ineffective.

– Establish decontamination areas to minimize contact of

contaminated employees and equipment with uncontaminated employees or equipment.

– Make sure only authorized employees remove protective clothing or equipment from changing rooms.

– Inform commercial laundries or cleaning establishments about the potentially harmful effects from exposure to hazardous substances.

– Properly decontaminate or dispose of decontamination equipment and solvents.

NEW SECTION

WAC 296-843-15010 Provide showers and changing rooms.

You must:

✎ Provide changing areas and showers outside a contaminated area, when needed for worker decontamination, that include at least the following:

– Separate changing areas:

✂ One to provide a clean area where employees can remove, store, and put on street clothing with an exit leading off the work site.

✂ Another where employees can put on, remove, store, and dispose of work clothing and PPE with an exit leading to the work site.

– A shower area separating the changing areas.

✎ Prevent clean areas from being contaminated by hazardous substances.

✎ Provide and use other effective means for cleansing, if temperature conditions prevent the effective use of water.

✎ Locate showers and change rooms where worker exposures are below permissible exposure limits (PELs) or other published exposure levels.

– If this cannot be accomplished, use a ventilation system to supply air that is below the PELs or published exposure.

✎ Make sure all workers shower at the end of their work shift or before they leave the site, when needed for worker decontamination.

Illustration 3 is a sample diagram of a change room layout.

Place illustration here.

NEW SECTION

WAC 296-843-15015 Provide washing facilities.

You must:

✎ Provide adequate washing facilities to employees working in hazardous waste operations that are:

– Close and convenient to the work area.

– Located in areas where employee exposure is below PELs or other published exposure levels.

– Equipped so an employee can remove hazardous substances from themselves without assistance.

NEW SECTION

WAC 296-843-160 Emergency response for hazardous waste sites.

Your responsibility:

To establish an emergency response plan for emergencies at the hazardous waste site.

You must:

Establish an emergency response plan for anticipated emergencies before beginning hazardous waste operations WAC 296-843-16005.

NEW SECTION

WAC 296-843-16005 Establish an emergency response plan for anticipated emergencies before beginning hazardous waste operations.

Exemption: Employers are exempt from preparing an emergency response plan if they do ALL of the following:

✎ Evacuate all employees from the danger area during an emergency.

✎ Prohibit employees from assisting in the emergency response.

✎ Prepare an emergency action plan that complies with WAC 296-24-567(1), Evacuation plan.

IMPORTANT:

Treatment, storage, and disposal (TSD) employers are not required to duplicate subjects fully addressed in the contingency plan required by permits when the contingency plan is part of their emergency response plan. Examples of permits would be those issued by the department of ecology.

You must:

(1) Establish and maintain the plan to reflect current site conditions, information, and personnel:

✎ Include policies or procedures for at least the following:

– Preemergency planning.

– Coordination with outside organizations.

– Current site topography, layout, and weather conditions.

– Personnel roles.

– Lines of authority.

– Communication.

– Reporting incidents to local, state, and federal government agencies.

– Emergency recognition and prevention.

– Safe distances and places of refuge.

– Site security and control.

– Evacuation routes.

– Decontamination not covered by the site-specific HASP.

– Emergency medical treatment and first aid.

– Emergency alert and response.

– Personal protective equipment and emergency equipment.

– Employee training.

– Critique of the response effort and appropriate followup.

✎ Use available information at the time of the emergency to:

– Evaluate the incident and site response capabilities.

– Proceed with appropriate steps to implement your emergency response plan.

✎ The emergency response plan must be:

– Kept as a separate section of your site-specific health and safety plan (HASP);

AND

– Integrated and compatible with, local, state, and federal plans for disasters, fires, and emergency responses.

(2) Establish an alarm system to alert employees to all of the following:

✎ An on-site emergency incident:

– To stop work activities, if necessary.

– To lower background noise to assist communication.

– To begin emergency procedures.

(3) Rehearse the plan as part of site operations training.

NEW SECTION

WAC 296-843-170 Employee exposure controls.

Your responsibility:

Implement feasible controls to protect employees from exposure to site hazards.

You must:

Control employee exposure to site health and safety hazards WAC 296-843-17005.

Establish procedures for using and evaluating new technology WAC 296-843-17010.

NEW SECTION

WAC 296-843-17005 Control employee exposure to site health and safety hazards.

You must:

✎ Use feasible controls, selected based on monitoring and other available information, to protect employee exposure above permissible exposure limits (PELs) or other published exposure levels.

– Examples of controls include:

✂ Installing pressurized cabs or control booths on equipment.

✂ Using remotely operated material handling equipment.

✂ Removing all nonessential employees when opening drums.

✂ Wetting down dusty operations.

✂ Positioning employees upwind of possible hazards.

✎ Evaluate new technologies and other control measures before using them on a large scale.

✎ Use any reasonable combination of controls and personal protective equipment (PPE) to reduce and maintain employee exposure at or below the PELs, published exposure levels, or dose levels when controls are not either:

– Feasible;

OR

– Effective.

✎ Make sure PPE does NOT replace controls.

– PPE should be used only as a supplement to controls.

Note: For those hazardous substances without PELs or published exposure levels, use other published literature and

material safety data sheets (MSDSs) to help decide what level of protection is appropriate. For more information about MSDSs, see WAC 296-800-180 in the *Safety and Health Core Rules* book.

You must:

✎ Use employee rotation to reduce exposure below ionizing radiation PELs or dose limits, when that is the **only** feasible means of protecting employees.

NEW SECTION

WAC 296-843-180 Drum and container handling.

Your responsibility:

To handle drums and containers in ways that minimize the hazard to employees.

You must:

Handle drums and containers safely
WAC 296-843-18005.

Handle drums and containers suspected of containing shock-sensitive (explosive) wastes safely
WAC 296-843-18010.

Maintain worker safety in drum and container opening areas
WAC 296-843-18015.

Ship and transport drums and containers safely
WAC 296-843-18020.

IMPORTANT:

✎ Containers or drums containing shock-sensitive (explosive) or potentially shock-sensitive wastes require special handling precautions.

✎ Handle, transport, label, and dispose of drums and containers according to this chapter and other United States Department of Transportation (DOT), WISHA, EPA, and Washington department of ecology regulations for:

- Drums.
- Containers.
- Hazardous substances.
- Contaminated soils.
- Liquids, and other residues.

NEW SECTION

WAC 296-843-18005 Handle drums and containers safely.

Preparation for moving drums and containers:

You must:

✎ Assess hazards to employees, such as radioactive waste, before handling drums and containers.

✎ Consider unlabeled drums and containers to contain hazardous substances and handle them accordingly, until the contents are positively identified, labeled, and assessed for hazards.

✎ Inspect and make sure drums and containers are sound before moving them.

– If it is not practical to inspect drums without moving them, move drums and containers to an accessible location and inspect prior to further handling.

✎ Remove soil or other materials covering drums or containers with caution to prevent rupture.

✎ Use ground-penetrating systems or other types of detection systems or devices to estimate the location and depth of buried drums or containers.

✎ Use the sampling plan and procedures included in the site-specific HASP to sample the contents of containers and drums.

Moving drums and containers:

You must:

✎ Warn all employees exposed to drum movement operations about the potential hazards associated with the contents of the drums or containers prior to moving them.

✎ Minimize movement of drums or containers.

✎ Select, position, and operate tools and material handling equipment to prevent the ignition of flammable vapors.

✎ Handle tanks and vaults containing hazardous substances with the same precautions as for drums and containers, taking into account the size of tank or vault.

Handling spills and leaks:

You must:

✎ Contain and isolate the entire volume of a hazardous substance in a drum or container when a spill occurs.

✎ Have available and use both of the following in areas where spills, leaks, or ruptures may occur:

– United States Department of Transportation (DOT) specified salvage drums or containers.

– Suitable quantities of proper absorbent materials.

✎ Empty drums and containers, that cannot be moved without rupturing, leaking, or spilling, into a sound container.

– Use a pump or other device classified for the material being transferred.

✎ Have fire-extinguishing equipment on-hand to control fires in their initial stage.

Reference: For further information, see the safety and health core rules, WAC 296-800-300, Portable fire extinguishers.

NEW SECTION

WAC 296-843-18010 Handle drums and containers suspected of containing shock-sensitive (explosive) wastes safely.

You must:

✎ Allow only essential employees in the transfer area.

✎ Communicate as follows:

– Signal the beginning and end of shock-sensitive (explosive) waste handling activities with an alarm system that is capable of being perceived above background light and noise.

– Maintain continuous communications throughout the handing operation:

✂ Between the employee-in-charge of the immediate handling area AND the site safety and health supervisor AND the command post.

✂ Using portable radios, hand signals, or telephones, as appropriate.

– Prevent the use of communication equipment or methods that could cause shock-sensitive (explosive) materials to explode.

✎ Provide material handling equipment with explosive containment devices or shields to protect equipment operators from exploding containers.

✎ Do not move bulging or swollen drums or containers until the cause for excess pressure is determined and you can move the drum or container safely.

✎ Consider packaged laboratory wastes or laboratory waste packs shock-sensitive or explosive until the contents have been characterized.

– Make sure laboratory waste packs are opened only:

✂ When necessary.

✂ By a person knowledgeable in the inspection, classification, and segregation of the containers within the pack.

NEW SECTION

WAC 296-843-18015 Maintain worker safety in drum and container opening areas.

You must:

✎ Keep employees who are not involved in opening drums or containers a safe distance from the opening area.

✎ Use appropriate shielding between the employee and the drums or containers, when excess interior pressure cannot be relieved from a remote location.

✎ Provide an explosion-resistant barrier that does not interfere with the work to protect employees working near or adjacent to drum or container opening operations from accidental explosions.

✎ Position controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment behind the explosion-resistant barrier. Prohibit employees from standing on or working from drums or containers.

Reference: The shipment of shock-sensitive (explosive) waste may be prohibited under United States Department of Transportation (DOT) regulations. You and your shipper should refer to title 49 CFR.

NEW SECTION

WAC 296-843-18020 Ship and transport drums and containers safely.

You must:

(1) Identify and classify drum and container contents prior to packaging for shipment.

(2) Provide staging areas:

✎ Each staging area must have adequate entry and exit routes.

✎ The number of drum or container staging areas must be kept to the minimum needed to identify and classify materials safely and prepare them for transport.

(3) Permit bulking of hazardous wastes only after a thorough characterization of the wastes has been completed.

Note: Handle, transport, label, and dispose of drums and containers according to this chapter and other United States Department of Transportation (DOT), WISHA, EPA, and Washington department of ecology regulations for:

✎ Drums.
✎ Containers.
✎ Hazardous substances.
✎ Contaminated soils.

NEW SECTION

WAC 296-843-190 Personal protective equipment (PPE). Your responsibility:

To use PPE to protect employees when feasible controls do not remove the hazardous exposure.

You must:

Provide and use appropriate PPE during the initial entry WAC 296-843-19005.

Reference: For additional information about developing a PPE plan, see the PPE user guide found at http://www.lni.wa.gov/wisha/publications/PPEGuide/PPEload.htm.

Note: The manufacturer's information on PPE may be used to meet your PPE plan requirements. For example, the manufacturer's procedures for putting on and taking off PPE may be attached to the site-specific health and safety plan (HASP).

NEW SECTION

WAC 296-843-19005 Provide and use appropriate PPE.

Reference: See WAC 296-843-110, Evaluations and inspections, found in this chapter, for more information about how to identify hazards and complete your preliminary site evaluation.

You must:

(1) Make sure the PPE you provide and use for initial entry protects employees from known or suspected safety and health hazards identified during the preliminary site evaluation as follows:

If	Then
The need for atmosphere supplying respirators and chemical protective clothing has NOT been eliminated	Provide atmosphere supplying respirators and protective clothing
Employees use respiratory protection other than a positive-pressure SCBA for initial entry	Include an escape self-contained breathing apparatus (SCBA) with enough air to reach a safe location and always at least five minutes of air

✎ Use Table 2, Selecting PPE in Various Exposure Situations, to determine the level of PPE to provide during initial entry:

You must:

(2) Make sure the PPE you select provides employee protection based on:

✎ Actual and potential hazards identified during the site characterization and analysis (see WAC 296-843-110, Evaluations and inspections).

✎ Hazards likely to be encountered.

✎ Required tasks and their duration.

✎ Site requirements and limitations.

✎ Use Table 2 to identify the type of PPE that is required for various exposure situations.

Table 2
Selecting PPE in Various Exposure Situations

If	Then

Changing site conditions indicate a change in employee exposure	Review and adjust the level of protection as appropriate **Note:** You may decrease the level of protection when information indicates this will not increase employee exposure to safety or health hazards
There is a substantial possibility that skin absorption or contact with a hazardous substance may: ✎ Impair an employee's ability to escape ✎ Cause immediate serious illness or injury ✎ Is an IDLH or immediate death hazard	Use totally encapsulating chemical protective (TECP) suits and make sure they will protect employees from the hazards ✎ Use, decontaminate, inspect, and remove TECP suits from service according to the manufacturer's recommendations ✎ Perform any TECP integrity tests recommended by the manufacturer and make sure all TECP suits are capable of: – Maintaining positive air pressure – Preventing inward test gas leakage of more than 0.5% **Note:** Follow the manufacturer's recommended procedures for testing a TECP suit's ability to maintain positive air pressure and prevent inward gas leakage. Other established test protocols for these suits, for example, NFPA 1991 and ASTM F1052-97, may also be used
There is a substantial possibility that employee exposure to hazardous substances will either: ✎ Immediately cause death, serious illness, or serious injury	Use a positive-pressure SCBA or an airline respirator with an escape SCBA ✎ Protect air supply from contamination and the entire respirator system from physical damage

OR ✎ Impair an employee's ability to escape	

Note: If there is not a permissible exposure limit (PEL) or other published exposure level for a hazardous substance, you may use published studies and information as a guide for selecting appropriate PPE.

NEW SECTION

WAC 296-843-200 Training, briefings, and information.

Your responsibility:

To make sure employees and subcontractors have the training and information needed to work safely.

You must:

Inform workers and employers about the hazardous waste site

WAC 296-843-20005.

Train workers, supervisors and managers before work begins on the site

WAC 296-843-20010.

Provide additional training to your managers and supervisors

WAC 296-843-20015.

Training for postemergency response

WAC 296-843-20020.

Make sure your employees receive written documentation of training

WAC 296-843-20025.

Provide refresher training to employees

WAC 296-843-20030.

Use qualified trainers

WAC 296-843-20035.

IMPORTANT:

If law enforcement personnel participate in clean-up activities, they must receive appropriate hazardous waste clean-up training as described in this chapter.

NEW SECTION

WAC 296-843-20005 Inform workers, contractors and subcontractors about the hazardous waste site.

You must:

✎ Inform employees, contractors, and subcontractors or their representatives, about:

– The nature, level, and degree of exposure to hazardous substances they're likely to encounter.

– All site-related emergency response procedures.

– Any identified potential fire, explosion, health, safety, or other hazards.

✎ Conduct briefings for employees, contractors, and subcontractors, or their representatives as follows:

– A preentry briefing before any site activity is started.

– Additional briefings, as needed, to make sure that the site-specific HASP is followed.

– Make sure all employees working on the site are:

✂ Informed of any risks identified.

✂ Trained on how to protect themselves and other workers against the site hazards and risks.

✎ Update all information to reflect current site activities and hazards.

NEW SECTION

WAC 296-843-20010 Train workers, supervisors and managers before work begins on the site.

IMPORTANT:

✎ The eighty-hour training requirement does NOT apply to law enforcement personnel entering illicit drug labs, securing the premises, and obtaining evidence. Attendance at a forty-hour training course, such as presented by the criminal justice training commission, is acceptable.

✎ These training requirements do not apply to workers engaged in limited postemergency response activities provided they meet the conditions described in WAC 296-843-20020.

You must:

✎ Make sure workers have received twenty-four-, forty- or eighty-hour training as required by Table 3 before participating in hazardous waste operations.

✎ Make sure workers also receive site-specific training that thoroughly covers at least the following:

– The personnel responsible for employee safety and health.

– Safety, health, and other hazards known or suspected at the site.

– Use of personal protective equipment.

– Work practices to minimize worker's risk from the hazards.

– Use of engineering and other controls and equipment on the site.

– Medical surveillance provided.

– Recognition of signs and symptoms that might indicate overexposure to site hazards.

– The contents of the site-specific health and safety plan (HASP) required by this chapter.

Note: The site-specific training can be provided as part of the twenty-four-, forty- or eighty-hour training or as part of the employee briefings provided all training and information requirements of WAC 296-843-200 are met.

Table 3
Training Requirements

If	Then	Notes
Work and exposures require use atmosphere supplying respirators (except for "occasionally on site" workers described below)	Provide eighty hours of training and three days of supervised on-site field experience	Eighty-hour training may be fulfilled as follows: ✎ One eighty-hour training session with emphasis on hazards requiring the use of atmosphere-supplying respirators and of chemical protective clothing **OR** ✎ One forty-hour training class as described below and an additional forty hours of training that emphasizes hazards requiring the use of atmosphere-supplying respirators and of chemical protective clothing Refresher training, previous courses, supervised field experience, and previous work experience may count towards the additional forty hours, if it improves the worker's competency to use respirators and chemical protective clothing ensembles and procedures

Work and exposures may exceed the PEL or require protective clothing but do not require atmosphere supplying respirators (except for "occasionally on site" workers described below)	Provide forty hours of training and three days of supervised on-site field experience	Workers with twenty-four hours of training may become forty hour trained with sixteen hours of off-site training and two additional days of supervised on-site field experience
Workers are occasionally on-site to perform specific limited tasks and unlikely to be exposed above PELs or other published exposure limits	Provide twenty-four hours of training and one day of supervised on-site field experience	
Workers are regularly on-site but work in areas fully characterized and monitored, with exposure under the PELs or other published exposure limits: ✎ No need for respirators ✎ No health hazards ✎ No possibility of an emergency	Provide twenty-four hours of training and one day of supervised on-site field experience	
Workers are at TSD facilities under normal operations (this does not include corrective actions cleanup at these facilities)	Provide twenty-four hours of training and one day of supervised on-site field experience	
Employees perform emergency response activities	Train workers to a level of competence in site emergencies, consistent with their assigned duties, to protect themselves and other employees	
Workers qualify for limited postemergency response cleanup	Provide at least eight hours of training	See WAC 296-843-20020, Training for postemergency response, for detailed training information
Workers have been previously trained (includes equivalent training)	Provide site-specific training, briefings and information required by this chapter and supervised field experience on the site of one day for twenty-four-hour and three days for forty- or eighty-hour trained workers	Document equivalent training and work experience as required by WAC 296-843-20025

Note: When calculating "training hours," WISHA assumes a "normal" workday of eight hours with sufficient time for lunch and other breaks.

NEW SECTION

WAC 296-843-20015 Provide training to your managers and supervisors.

You must:

✎ Make sure the following receive appropriate training:

– On-site managers.

– Supervisors responsible for hazardous waste operations.

– Supervisors who directly supervise employees in hazardous waste operations.

✎ Make sure such supervisors and on-site managers receive the same training as that required by the workers they supervise (see WAC 296-843-20010).

✎ Make sure such supervisors and managers receive a minimum of eight additional hours of specialized training including the following information:

– Written site-specific health and safety plan (HASP):

✂ Training plan.

✂ Personal protective equipment (PPE) plan.

✂ Spill containment plan.

✂ Emergency management procedures to use when a release of hazardous substances occurs.

✂ Federal, state, and local agencies to be contacted if there is a release of hazardous substances.

✂ Sampling and monitoring plan (including procedures and techniques for monitoring health hazards).

– Managing hazardous wastes and their disposal.

NEW SECTION

WAC 296-843-20020 Training for postemergency response.

You must:

✎ Provide workers who participate only in limited postemergency response clean-up operations with a minimum of eight hours of training, when these conditions are met:

– Cleanup is at a site that is a hazardous waste operation only because of an emergency response.

– Clean-up work is directly supervised by someone who has

completed at least forty hours of training in hazardous waste operations as required in this chapter.

– Written documentation is maintained at the work site supporting less than twenty-four hours of training.

– The work:

✂ Is performed in an area that has been monitored and fully characterized by a qualified person as an area where employee exposure cannot exceed PELs or other published exposure levels.

✂ Does not require using respiratory protection.

✂ Does not require entry into permit-required confined spaces.

✂ Involves minimal health risks from skin exposure and absorption that are effectively controlled by PPE.

– Workers have received training in your emergency response plan and hazard communication program.

Reference: For additional information, see WAC 296-843-160, Emergency response, and WAC 296-800-170, Employer chemical hazard communication.

You must:

✎ Make sure workers complete any other safety and health training needed to perform assigned clean-up tasks in a safe and healthful manner.

– Training may include topics such as the following:

✂ Safety hazards and controls.

✂ The content and availability of the site-specific health and safety plan.

✂ Decontamination procedures.

✂ Operating procedures related to assigned clean-up tasks.

✂ PPE use and limitations.

✂ Hands-on exercises for PPE and decontamination.

✂ Information about heat stress and hypothermia.

✎ Make sure workers have been trained within the last twelve months.

NEW SECTION

WAC 296-843-20025 Make sure your employees receive written documentation of training.

You must:

✎ Certify and document annually that each manager, supervisor, and worker has either:

– Attended and successfully completed the training required by this section;

OR

– Demonstrated their competency.

✂ Record and maintain the method used to demonstrate competency.

✎ Make sure your employees and supervisors who complete required training and field experience receive written training documentation authenticated by the responsible trainer.

✎ Provide a copy of the certification or documentation to your employee upon request.

Note: Equivalent training may include academic or work-related training that covers subjects required by this chapter.

NEW SECTION

WAC 296-843-20030 Provide refresher training to employees.

You must:

✎ Make sure all certified employees, supervisors, and managers receive eight hours of refresher training at least every twelve months that covers:

– The topics specified in WAC 296-843-200.

– Assessments or evaluations of work-related incidents.

– Any other relevant topics.

NEW SECTION

WAC 296-843-20035 Use qualified trainers.

You must:

Use trainers that:

✎ Have demonstrated competent instructional skills.

✎ Demonstrate knowledge of the subject matter and have either:

– Satisfactorily completed a training program in the subject;

OR

– Have the academic credentials and instructional experience needed for teaching the subject.

NEW SECTION

WAC 296-843-210 Medical surveillance.

Your responsibility:

To provide medical surveillance for employees that work in hazardous waste operations.

You must:

Provide medical surveillance for your employees WAC 296-843-21005.

NEW SECTION

WAC 296-843-21005 Provide medical surveillance for your employees.

You must:

✎ Establish a medical surveillance plan for all employees who meet any of the following:

– Are or may be exposed to hazardous substances or health hazards for at least thirty days a year, at or above the permissible exposure limits (PELs) or other published exposure levels.

– Wear a respirator for at least thirty days a year.

– Are injured, become ill, or develop signs or symptoms of possible overexposure to hazardous substances or health hazards.

– Are hazardous materials team (HAZMAT) members.

Reference: Employees who use respirators less than thirty days a year are required to have a respirator medical evaluation as outlined by chapter 296-842 WAC, Respirators. Completion of a medical examination required by this section will meet the requirement for a respirator medical evaluation.

You must:

✎ Make sure medical examinations, consultations, and procedures are:

– Scheduled according to Table 4, Medical Examination Schedule.

– Performed or supervised by a licensed physician.

– Available:

✂ At a reasonable time and place.

✂ Without loss of pay.

✂ Without cost to employees.

Note: Examples of costs include: Mileage, gas, bus fare, and time spent outside normal work hours.

Table 4
Medical Examination Schedule

If a worker	Then provide an examination
Is assigned to work that is covered by this chapter	Before work assignment begins
Continues to work in hazardous waste operations	At least once every twelve months, unless the attending physician decides a different interval, up to twenty-four months or less than twelve months, is appropriate
Needs to be examined more frequently based on the examining physician's medical judgment	At an interval less than twelve months
Is reassigned to an area where their work is not covered **OR** Employment is terminated	As soon as possible, unless he or she was examined within the past six months
Has an incident that results in injury or illness **OR** Develops signs or symptoms of possible overexposure to hazardous substances and health hazards **OR** Has been exposed above the permissible exposure limits or published exposure levels	As soon as possible
Requires follow-up examinations or consultations because of medical necessity for an exposure incident or injury	Whenever the examining physician determines

You must:

✎ Make sure the medical examination includes the following information for each affected employee:

– A medical and work history, with special emphasis on symptoms related to handling hazardous substances and health hazards.

– Information about fitness for duty including the ability to wear any personal protective equipment (PPE) under conditions that may be expected at the workplace.

– Any additional information that is determined by the examining physician.

Note: The physician should consult the NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities http://www.cdc.gov/niosh/85-115.html.

You must:

✎ Provide complete information to the examining physician, including:

– A copy of WAC 296-843-210.

– Medical evaluation information required by chapter 296-842 WAC, Respirators.

– A description of the employee's duties that relate to hazardous substance exposure.

– The actual or anticipated hazardous substance exposure levels for the employee.

– A description of the PPE the employee uses or could use.

– Information available from previous medical examinations.

– Instruction to the physician that the physician's written opinion NOT include specific findings or diagnoses that are not related to occupational exposures.

Note: You are NOT required to send duplicate information to the physician for each employee.

You must:

✎ Obtain the physician's written medical opinion that includes the following information:

– Whether medical conditions were found that would increase the employee's risk for impairment during emergency response work or respirator use.

– Limitations of the employee's assigned work, if any.

– Examination and test results, if the employee requests this information.

– A statement that the employee has been confidentially informed of medical examination results (including medical conditions requiring followup required by WAC 296-843-210).

✎ Provide the employee with a copy of the physician evaluation.

NEW SECTION

WAC 296-843-220 Recordkeeping and information access.

Your responsibility:

To keep records and make them accessible to employees.

You must:

Make your records accessible
WAC 296-843-22005.

Keep medical surveillance records for your employees
WAC 296-843-22010.

NEW SECTION

WAC 296-843-22005 Make your records accessible.

You must:

✎ Allow your written health and safety plan (HASP) and all other written plans required by this chapter to be inspected and copied by:

– Employees or their designated representative.

– Site contractors or their designated representatives.

– Subcontractors or their designated representatives.

– Personnel of any federal, state, or local agency with regulatory authority over the site.

NEW SECTION

WAC 296-843-22010 Keep medical surveillance records for your employees.

You must:

✎ Keep medical surveillance records for each affected employee that include:

– The employee's name and Social Security number.

– Physicians' written opinions including recommended limitations and results of examinations and tests.

– Any employee medical complaints regarding hazardous substance exposures.

– A copy of all information given to the examining physician (except a copy of this chapter).

✎ Keep each employee's records for at least the duration of his or her employment plus thirty years.

Reference: For additional requirements on medical and exposure records, see chapter 296-62 WAC, Part B, Access to records.

NEW SECTION

WAC 296-843-300 Definitions.

Buddy system

A system of organizing employees into work groups so that each employee is assigned to observe another employee in the

same work group. The purpose of this system is to provide rapid assistance to employees in the event of an emergency.

Clean-up operation

An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the goal of making the site safer for people or the environment.

Contamination reduction zone

The buffer zone between the exclusion and the clean zone.

Decontamination

The removal of hazardous substances from employees and equipment, to the extent necessary, to avoid foreseeable adverse health effects.

Emergency response or responding to emergencies

An organized response to an anticipated release of a hazardous substance that is, or could become, an uncontrolled release.

Exclusion zone

A controlled area at a site, where contamination occurs, that is a risk to human health or the environment.

Exposure or exposed

Employee contact with a toxic substance, harmful physical agent, or oxygen deficient condition. Exposure can occur through various routes of entry, such as inhalation, ingestion, skin contact, or skin absorption.

Facility

Any building structure, installation, equipment, pipe, or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft;

OR

Any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise located (not including any boat, ship or barge).

Hazardous substance

Any of the following substances that could adversely affect an exposed employee's health or safety:

✎ Substances defined under section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or "Superfund" Act (found at: http://www.epa.gov).

✎ Biological or other disease-causing agents released that could reasonably be expected to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, including malfunctions in reproduction, or physical deformations in a person or their offspring when the person:

– Is directly exposed to the agent in the environment.

– Directly ingests, inhales, or assimilates the agent from

the environment.

– Indirectly ingests the agent through a food chain.

✎ Substances listed by the United States Department of Transportation as hazardous materials under Title 49 (Transportation) in the Code of Federal Regulations (CFR), Part 172, section 101 and appendices (found at: http://www.nara.gov, search for "List of CFR subjects").

✎ Hazardous wastes as defined in this chapter.

Hazardous waste

Any substance designated by the department of ecology as a dangerous or extremely hazardous waste by chapter 173-303 WAC, Dangerous waste regulations.

Hazardous waste site

A hazardous waste site is any facility or location within the scope of this chapter. This chapter applies if you have any of the following:

✎ Employees working in operations involving hazardous waste at a treatment, storage, and disposal (TSD) facility required to have a permit or interim status AND regulated by any of the following:

– 40 CFR Parts 264 and 265 under the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. 6901 et seq.;

– Agencies implementing RCRA through agreements with the United States Environmental Protection Agency (U.S.E.P.A.);

– Chapter 173-303 WAC, Dangerous waste regulations;

OR

✎ Employees conducting initial investigations of government-identified sites before the presence or absence of hazardous substances has been determined;

OR

✎ Employees working at a hazardous waste site to make the site safer for people or the environment. Sites include, but are not limited to:

– The Environmental Protection Agency's (EPA) National Priority Site List (NPL); see http://www.epa.gov/superfund/sites/npl/wa.htm;

– Sites recommended for inclusion on the EPA NPL;

– State priority site lists, for example those listed under chapter 173-340 WAC, Model Toxics Control Act (MTCA); see http://www.ecy.wa.gov/programs/tcp/cscs/CSCSpage.HTM;

– Unlisted sites recognized by a federal, state or local government as an uncontrolled hazardous waste site. Examples of such sites include:

✂ Those exceeding clean-up goals established by the MTCA that pose a threat or potential threat to human health or the environment.

✂ Clandestine drug lab sites designated for cleanup.

– Sites covered by the Resource Conservation and Recovery

Act of 1976 (RCRA) as amended (42 U.S.C. 6901 et seq.) or chapter 70.105 RCW, Hazardous waste management.

– Postemergency response cleanup at the site of a hazardous substance release regulated by chapter 296-824 WAC, Emergency response.

Hazardous materials team (HAZMAT team)

A group of employees who are expected to perform responses to releases, or possible releases, of hazardous substances for the purpose of control and stabilization. As a result of their duties, HAZMAT team members may have close contact with hazardous substances.

Health hazard

A chemical, mixture, biological agent, or physical agent that may cause health effects in short- or long-term exposed employees based on statistically significant evidence from at least one study conducted using established scientific principles. Health hazards include:

- Carcinogens.
- Toxic or highly toxic agents.
- Reproductive toxins.
- Irritants.
- Corrosives.
- Sensitizers.
- Hepatotoxins (liver toxins).
- Nephrotoxins (kidney toxins).
- Neurotoxins (nervous system toxins).
- Substances that act on the hematopoietic system (blood or blood-forming system).
- Substances that can damage the lungs, skin, eyes, or mucous membranes.
- Hot or cold conditions.

IDLH or immediately dangerous to life or health

Any atmospheric condition that would:

- Cause an immediate threat to life;

OR

- Cause permanent or delayed adverse health effects;

OR

- Interfere with an employee's ability to escape.

Incidental release

A release that can be safely controlled at the time of the release and does not have the potential to become an uncontrolled release.

An example of a situation that results in an incidental release:

A tanker truck is receiving a load of hazardous liquid when a leak occurs. The driver knows the only hazard from the liquid is minor skin irritation. The employer has trained the driver on procedures and provided equipment to use for a release of

this quantity. The driver puts on skin protection and stops the leak. A spill kit is used to contain, absorb, and pick up the spilled material for disposal.

Material safety data sheet (MSDS)

Written, printed, or electronic information (on paper, microfiche, or on-screen) that informs manufacturers, distributors, employers or employees about a hazardous chemical, its hazards and protective measures as required by chapter 296-839 WAC, Content and distribution of material safety data sheets (MSDSs) and label information.

Oxygen deficiency

An atmosphere where the percentage of oxygen by volume is less than 19.5%.

Permissible exposure limit (PEL)

Permissible exposure limits (PELs) are employee exposures to toxic substances or harmful physical agents that must not be exceeded. PELs are specified in applicable WISHA rules.

Published exposure level

Exposure limits published in "*National Institute for Occupational Safety and Health (NIOSH) Recommendations for Occupational Safety and Health*" (DHHS publication #92-100, 1992).

If an exposure limit is not published by NIOSH, then "published exposure level" means the exposure limits published by the American Conference of Governmental Industrial Hygienists (ACGIH) in "*TLVs and BEIs-Threshold Limit Values for Chemical Substances and Physical Agents*" (1999 edition).

Postemergency response

The stage of the emergency response where the immediate threat from the release has been stabilized or eliminated, and cleanup of the site has started. For more information, see the definition for "emergency response."

Site safety and health supervisor (or official)

The individual present at a hazardous waste site who is responsible to the employer and has the authority and knowledge necessary to establish the site-specific health and safety plan and verify compliance with applicable safety and health requirements.

Site work zones

Zones established at a hazardous waste site before clean-up work begins to control work on the site and access to the site. The work zones are: Exclusion zone, contamination reduction zone, and clean zone.

Uncontrolled hazardous waste site

An area identified as an uncontrolled hazardous waste site by a governmental body, whether federal, state, local, or other, where an accumulation of hazardous substances creates a threat to the health and safety of individuals or the environment or both. Examples include: Former municipal, county, or state

landfills, locations where illegal or poorly managed waste disposal has taken place, or property of generators or former generators of hazardous substance waste (surface impoundments, landfills, dumps, and tank or drum farms).